

REMARKS

The final Office action mailed on 20 May 2004 (Paper No. 8) has been carefully considered.

Claim 25 is being canceled without prejudice or disclaimer, and claims 22, 26 and 32 are being amended. Thus, claims 1, 4 thru 12, 15 thru 24 and 26 thru 35 are pending in the application.

It should be noted that the claims are being amended merely for the purpose of combining independent claim 22 and associated dependent claim 25, the latter being canceled, adjusting the dependency of dependent claim 26, and rewriting dependent claim 32 in independent form. Thus, no "new issue" is raised by these amendments, and accordingly, this Amendment After Final should be entered.

In paragraph 3 of the final Office action, the Examiner rejected claims 1, 4 thru 12, 15 thru 22 and 27 thru 34 under 35 U.S.C. §103 for alleged unpatentability over Kuo *et al.*, U.S. Patent No. 6,226,040. In paragraph 4 of the Office action, the Examiner rejected claims 23, 24, 30 and 35 under 35 U.S.C. §103 for alleged unpatentability over Kuo *et al.* '040 in view of Suen *et al.*, U.S. Patent No. 6,552,750. In paragraph 5 of the Office action, the Examiner rejected claims 25 and 26 under 35 U.S.C. §103 for alleged unpatentability over Kuo *et al.* '040 in view of Kim, U.S. Patent No. 6,473,130. For the reasons stated below, it

is submitted that the invention recited in the claims, as now amended, is distinguishable from the prior art cited by the Examiner so as to preclude rejection under 35 U.S.C. §103.

With respect to the latter rejections, it is noted that dependent claim 30 is listed, in the final Office action, as being rejected under 35 U.S.C. §103 based on Kuo *et al.* '040 alone, but it is also listed as rejected under 35 U.S.C. §103 based on the combination of Kuo *et al.* '040 with Suen *et al.* '750. It is requested that the rejection of claim 30 be clarified in the next action by the Examiner. In the meantime, it is presumed that dependent claim 30 is rejected under 35 U.S.C. §103 for alleged unpatentability over Kuo *et al.* '040 in combination with Suen *et al.* '750.

In rejecting independent claims 1 and 11 under 35 U.S.C. §103 for alleged unpatentability over Kuo *et al.* '040, the Examiner admitted (in paragraph 3 on page 4 of the final Office action) that Kuo *et al.* '040 does not disclose a controller which adds a highlight signal to video signals to thereby increase the level of the composed video signals of the highlight portion, and did not disclose a controller which subtracts the highlight signal from the video signals to thereby decrease the level of the composed video signals of the highlight portion. However, the Examiner took "Official Notice" that "it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the old and well known superimposing and desuperimposing the highlight signal on the video signal ... since it merely amounts of [*sic*] selecting an alternative equivalent device for adding highlight

signal and video signal” (quoting from the paragraph bridging pages 4 and 5 of the final Office action).

In support of the taking of “Official Notice”, the Examiner cited (in paragraph 1 of the final Office action), Lake Jr., U.S. Patent No. 4,809,070. The Examiner cited this patent “to suggest the capabilities of adding and subtracting the luminance along edges of the luminance field (highlights and shadows)” (quoting from page 3, lines 3-4 of the final Office action). For the reasons stated below, it is submitted that Lake, Jr. ‘070 is unrelated and not applicable to the pertinent recitations contained in independent claims 1 and 11 of the present application.

Specifically, referring to column 1, lines 8-28 of Lake, Jr. ‘070 (as cited by the Examiner on page 2 of the final Office action), the patent states that, “[a]mong the video effects than can be applied to an array of sample values representing a luminance field to produce an enhanced array which represents a somewhat different luminance field is an effect known as embossing” (*see* column 1, lines 8-12 of Lake, Jr. ‘070). The patent then states that edge information is extracted from an image, and used to add luminance along edges of one polarity and subtract luminance along edges of the opposite polarity” (quoting from column 1, lines 12-15 of the patent). In the latter respect, according to the patent, the “term ‘polarity’ as applied to an edge is intended to be understood as referring to the sign of the change in luminance across the edge when the edge is traversed in a particular direction”

(quoting from column 1, lines 17-18 of the patent). Thus, if the luminance increases, the edge is considered to be a positive polarity, and if the luminance decreases, the edge is considered to be a negative polarity (*see* column 1, lines 18-21 of the patent).

The Lake, Jr. '070 patent then proceeds to state that, "[w]hen luminance is added and subtracted along edges in the original luminance field, the areas of increased and reduced luminance appear to the eye as highlights and shadows which provide three-dimensional cues for the eye and achieve an embossed texture appearance" (quoting from column 1, lines 23-28 of the patent). Thus, whereas the patent refers to the addition and subtraction of luminance along edges in an original luminance field (referring to column 1, lines 23-25 of the patent), this is not seen to have much, if any, relevance to the claimed feature whereby a controller adds a highlight signal to video signals in their entirety (not merely to edges) to thereby increase the level of composed video signals of a highlight portion, and whereby the controller subtracts the highlight signal from the video signals in their entirety to thereby decrease the level of the composed video signal of the highlight portion, and this contradicts the allegation by the Examiner in the sentence bridging pages 2 and 3 of the final Office.

More specifically, whereas Lake, Jr. '070 discloses the addition or subtraction of luminance along edges of an image, the claimed feature at issue involves the addition or subtraction of a highlight signal or highlight signals to video signals in order to increase the level of composed video signals of a highlight portion. More specifically, Lake, Jr. '070

appears to add luminance to the edges of an image, whereas the feature recited in the claims involves the addition of subtraction of a highlight signal to video signals in their entirety. Furthermore, a review of Lake, Jr. '070 fails to reveal any mention whatsoever of a highlight signal or highlight signals added to or subtracted from video signals, and fails to mention composed video signals of highlight portion, such composed signals resulting from the composing of a highlight signal or highlight signals with the video signals.

As a result of the above, it is submitted that a substantial question exists as to the propriety of the taking of "Official Notice" on the part of the Examiner, and this raises a question as to the validity of the rejection under 35 U.S.C. §103 of claims 1 and 11.

Furthermore, there is nothing within the "four corners" of the disclosure of Kuo *et al.* '040 which would suggest to or instruct a person of ordinary skill in the art as to the necessity or desirability of modifying the disclosure of Kuo *et al.* '040 in the manner suggested by the Examiner. That is, Kuo *et al.* '040 does not contain any suggestion or instruction which would lead a person of ordinary skill in the art to modify the disclosure of Kuo *et al.* '040 so as to provide the controller with the capability of adding or subtracting a highlight signal from video signals in order to increase or decrease the level of the composite video signals of the highlight portion.

For the above reasons, it is respectfully submitted that independent claims 1 and 11,

and their associated dependent claims, recite the invention in a manner distinguishable from the prior art so as to preclude rejection under 35 U.S.C. §103.

Turning to consideration of amended independent claim 22, that claim is being amended to include the recitation of dependent claim 25, which is being canceled. As mentioned above, dependent claim 25 was rejected under 35 U.S.C. §103 based on the combination of Kuo *et al.* '040 with Kim '130.

Initially, with respect to original independent claim 22, it is noted that, on page 6 of the final Office action, the Examiner merely stated that claim 22 was "rejected for the same reason as discussed in claim 1" (quoting from page 6, line 9 of the final Office action). However, it is to be noted that, whereas independent claim 1 recites the control means in general terms, independent claim 22 recites the control means as comprising a highlight signal generating part for generating the highlight signal, and a signal composing part for combining the highlight signal with the video signals generated by the signal generating means (*see* the last paragraph of original independent claim 22). However, in rejecting independent claims 1 and 22, the Examiner does not state any correspondence between the recited "highlight signal generating part" and "signal composing part", on the one hand, and elements of Kuo *et al.* '040, on the other hand. Thus, it is not clear from the final Office action what elements of Kuo *et al.* '040 correspond to the "highlight signal generating part" and the "signal composing part" recited in the last paragraph of original independent claim

22.

Nevertheless, as stated above, independent claim 22 is being amended to include the recitation of dependent claim 25, which has been canceled. In rejecting claim 25 (in paragraph 5 of the final Office action), the Examiner cited the combination of Kuo *et al.* '040 and Kim '130, and admitted that Kuo *et al.* '040 did not disclose the provision of control means further comprising an image sharpness part for adjusting a signal size representing a borderline of the highlight portion according to a selection by the selection means, and for supplying the adjusted signal size to the signal composing part (*see* the second sub-paragraph of paragraph 5 on page 10 of the final Office action). However, the Examiner alleged that Kim '130 "teaches that the sub-picture display apparatus according to the present invention provides an effect capable of distinctively displaying the sub-picture more definitely and clearly, by thickening the boundary portion of the sub-picture and varying the brightness of the sub-picture to become brighter, in the case that the main picture is complicated spatially or an amount of temporal movement of the main picture is large" (quoting from page 10, lines 11-16 of the final Office action). In that regard, the Examiner cited Figure 4 and column 3, line 5 - column 4, line 8 of Kim '130.

However, Figure 4 and the cited portion of Kim '130 merely relate to the functioning of a controller 14 to control a signal processor 13 so that a width of a boundary portion between a main picture and a sub-picture has a predetermined first width which can be

discerned between the main picture and the sub-picture (*see* column 3, lines 25-30 of Kim '130). The disclosure of the cited patent also describes how the controller 14 controls the signal process 13 so that the width of the boundary portion between the main picture and the sub-picture becomes a predetermined second width (*see* column 3, lines 36-40 of the patent).

Nevertheless, there is no disclosure or suggestion in Kim '130 of the provision of an image sharpness part for adjusting a signal size presenting a borderline of the highlight portion **according to a selection by selection mean**, as recited in amended independent claim 22. Furthermore, there is no instruction as to how one of ordinary skill in the art would modify the disclosure of Kuo *et al.* '040 (specifically, Figure 2 thereof) so as to incorporate an image sharpness part into the controller 231 thereof, or into any other portion of the disclosed arrangement of Kuo *et al.* '040, so as to achieve the results achieved by the display apparatus of claim 22 of the present application. Finally, there is no portion of the primary reference (Kuo *et al.* '040), and the Examiner has not cited any portion thereof, which would motivate or suggest to a person of ordinary skill in the art that the disclosure of Kim '130 should be sought for the purpose of modifying Kuo *et al.* '040 in accordance with the disclosure of Kim '130 in an effort to arrive at the present invention.

For the above reasons, it is submitted that the invention recited in independent claim 22, as now amended, is distinguishable from the prior art so as to preclude rejection under 35 U.S.C. §103 for alleged unpatentability over Kuo *et al.* '040 in combination with Kim

'130.

As also mentioned above, dependent claim 32 has been amended to appear in independent form. In rejecting previous dependent claim 32 under 35 U.S.C. §103 based on Kuo *et al.* '040, the Examiner alleged that Kuo *et al.* '040 disclosed control means which "further comprises a clock generating part for generating a clock signal to set up a size and a position of the highlight portion", the Examiner alleging that the latter feature was "met by the pixel clock which is timing of displaying the further data (Fig. 3, col. 6, line 25 to col. 7, line 67)" (quoting from page 8, lines 1-4 of the final Office action). The Examiner is apparently referring to the OSP signal generator 330 shown in Figure 3 of Kuo *et al.* '040 as receiving a pixel clock input from the displaying signal generator 256 of Figure 2 thereof. However, Kuo *et al.* '040 does not make it clear as to whether or how the pixel clock input provided to the OSP signal generator 330 results in the setting up of a size and a position of a highlight portion, as alleged by the Examiner. Therefore, it cannot be said that Kuo *et al.* '040 discloses or suggests the clock generating part recited in amended claim 32.

Dependent claim 33 provides a further basis for distinguishing the invention from the cited prior art in that there is no disclosure or suggestion in Kuo *et al.* '040, or any other reference, of the control means further comprising an adjuster part connected to the clock generating part for receiving a clock signal, and for adjusting a size of the clock signal according to a control signal from selection means. The Examiner alleges (in the second


paragraph on page 8 of the final Office action) that these elements and functions are met by vertical pixel shift register 404 and horizontal shift register 402, citing column 6, line 25-column 7, line 67 of Kuo *et al.* '040. However, again, it is not clear from the cited patent as to how the shift registers 402 and 404 perform a function of adjusting a size of a clock signal input according to a control signal from selection means, as recited in dependent claim 33.

For the latter reasons, it is submitted that independent claim 32 and associated dependent claim 33 recite the invention in a in a manner distinguishable from the prior art so as to preclude rejection under 35 U.S.C. §103.

A fee of \$86.00 is incurred by the addition of an independent claim in excess of three.

In view of the above, it is submitted that the claims of this application are in condition for allowance, and early issuance thereof is solicited. Should any questions remain unresolved, the Examiner is requested to telephone Applicant's attorney.

Respectfully submitted,



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